

power, varying transparency of the air, and practice of the eye, so that aperture is less concerned in their case than in that of minute stars. Auwers, of Göttingen, argues on the same side. It has often, this observer says, been remarked—Encke's comet being an instance of it—that large, ill-defined, faint objects are best seen with small instruments."

Again, in the third edition of Mr. Chambers' *Descriptive Astronomy*, the following remarks were taken from the *Ast. Nach.*, vol. 86, No. 2045 :—"Schiaparelli, at Milan, trying a new telescope on February 25, 1875, saw this nebula very clearly, and was much surprised at its size. He noted it to extend from the star *Merope*, beyond *Electra* and as far as *Celæno*."

That is to say, he saw it extending in a direction at right-angles to the axis of my figure, seen the year following his observation, though not drawn until later.

It is to be hoped that further observations will be made of this most interesting nebula by possessors of telescopes with both large and small apertures; indeed, there seems to be quite a new field of research opened out for smaller telescopes. At the present moment I am inclined to think that the state of the air has great effect upon the visibility of this nebula and similar objects; for, with my four-inch Refractor on the mountains of Jamaica, I have seen the third or *gauze* ring of *Saturn* as clearly and as fully extended as in the drawings taken with the largest and most perfect instruments.

Discovery of a Gaseous Nebula in Cygnus.

By the Rev. T. W. Webb, F.R.A.S.

On the night of November 14, as I was sweeping in *Cygnus* with a power of probably about 50 on my 9.38-inch silvered mirror, by With, I came across an object resembling a bluish 9-magnitude star, which, however, on closer examination, did not entirely resemble other stars of that size, and which was soon proved by change of eye-piece to be of an entirely different nature. Under powers of 212, 375, and 450 it appeared as a nebulous disk, surrounded perhaps by a feeble glow, and about 4" in diameter. It was readily identified by Lord Lindsay and Mr. Knott as No. 4004 in Argelander, $+41^{\circ}$, with a place for 1880 of R.A. $21^{\text{h}} 2^{\text{m}} 31^{\text{s}}$, D.N. $41^{\circ} 45' 3$, and both observers recognised its monochromatic light.

Through the kindness of Dr. Copeland, by whom it has been carefully examined, under peculiarly favourable circumstances, at Lord Lindsay's Observatory, I am enabled to add the following interesting particulars.

It is not round, and has a sharp nucleus near the *n.p.* edge, with a faint effusion of light in the opposite direction. The value of three very measurable bright lines was given respectively in two

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sets as 500·1, 495·7, 487·0, and 500·1, 495·6, 486·0, and these accord so closely with the results deduced by D'Arrest, 500·4, 495·7, and 486·1, for lines of this nature, that there can be no question as to the character of the object. The relative strength of the lines appeared to Dr. Copeland to be about 8, 5, and 1, reckoned from the least refrangible end.

Hardwick Vicarage.
Dec. 1, 1879.

Note on the Gaseous Nebula in Cygnus. By G. Knott, Esq.

In a letter dated November 22, the Rev. T. W. Webb called my attention to a small object in *Cygnus* which he suspected might prove to be a gaseous nebula, a suspicion which I was able to confirm by observation on the 25th, when, with a McClean Star Spectroscope on my 7½-inch Refractor, I found its spectrum to consist apparently of one bright line of considerable intensity. The nebula is found in the *Bonner Durchmusterung*, where it is Zone +41° No. 4004, and with a small aperture and low magnifying power has the appearance of a hazy star of the 8·5 magnitude, which is the magnitude assigned by Argelander. With the full aperture it presents the appearance of a bright bluish white nebulosity slightly elongated *n.p. s.f.*, and I have the impression that it is brightest at its north preceding extremity.

Knowles Lodge, Cuckfield,
Dec. 11, 1879.

Note on the Rev. T. W. Webb's New Nebula.

By Lord Lindsay.

At 6 P.M. on November 22 Rev. Mr. Webb's planetary nebula was seen approximately monochromatic with a prism in front of the micrometer eye-piece. This observation was confirmed on the following evening, and late in the night Mr. Lohse saw a spectrum of three bright lines with the Grubb spectroscope.

On November 26, with the same spectroscope, the lines were found to have the following wave-lengths:—

	1	2	3	
	500·1	495·7	487·0	Observer, R. Copeland.
	500·1	495·6	486·0	„ J. G. Lohse.
Brightness	8	5	1	

The comparison spectrum was a hydrogen tube of Professor Piazzi Smyth's construction.

The nebula under a power of 307 shows a sharp nucleus near the *n.p.* edge, while the opposite side fades away like a very short tail or wisp.